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Western Fisheries Research Center (WFRC)

Western Fisheries Science News

Scott Smith (inset) retired in June, leaving a rich legacy of research on topics such as how best to treat ballast water to kill invasive species. Photos by USGS.

Scott Smith's Legacy of Invasives Research

Aquatic invasive species were barely on the radar in 1998 when Scott Smith was appointed as one of the first state coordinators for aquatic invasive species in the country. Smith started his new position without money or authority. "I had a computer and a telephone and that was it. They wished me luck," says Smith about his first day in his new job with Washington Department of Fisheries. But he put his resources to good use, first by educating state senator, Ken Jacobsen, about the ecological and economic risks posed by aquatic invasives like zebra mussel and European green crab, and then by working with state officials to help draft five separate pieces of legislation that gave Washington funding and authority to protect state waters from invasives. Now Smith had money and authority but no research capacity. For that he turned to USGS and, specifically, to WFRC's unique saltwater facility on Marrowstone Island where he coordinated with Paul Hershberger while establishing a research program to develop ballast water treatment techniques that would be safe, effective and cost-efficient.

The legislation that Smith helped create made Washington one of the first two states in the country to regulate the discharge of ballast waters, a major route for the introduction of invasives. Officials recognized the economically and ecologi-

Honors

WFRC Scientist Presents Keynote Address at Graduation Ceremony: On June 14, Jim Winton, Chief of the Fish Health Research team at WFRC, presented the keynote address at graduation services for the University of Washington School of Aquatic and Fishery Sciences (SAFS). Jim spoke about the value of a broad, environmentally-relevant education to address emerging problems. For more information, contact Jim Winton at jwinton@usgs.gov; 206-526-6587

Events

WFRC Photo Contest- Show Us What Puget Sound Means to You!: Through July WFRC will accept submissions of photos of Puget Sound. One grand prize winner and a guest will be eligible for a day trip to the site of the Elwha dam removal with a USGS ecologist; a night in the historic lightkeeper's house on Marrowstone Island; and a tour of our unique saltwater research facility. For more details visit ow.ly/mGQdJ or contact Lisa Hayward at lhayward@usgs.gov; 206-526-6596

WFRC Hosts the American Fisheries Society Fish Health Section Meeting: WFRC's Marrowstone Marine Field Station hosted the 2013 Annual American Fisheries Society Fish Health Section Meeting in Port Townsend, WA June 18 – 20. The meeting was attended by over 90 fish health professionals representing federal, state, tribal and private sectors from both the U.S. and Canada. A continuing education course on marine biotoxins was held in conjunction with the meeting. For more information contact Paul Hershberger at phershberger@usgs.gov; 360-384-1007 x 225

(continued from pg. 1) cally devastating effects of species like zebra mussels, which were clogging pipes and disrupting municipal water supplies after appearing in the Great Lakes in the 1980s. When managing invasive species, prevention is the best policy. But creating regulations to ensure prevention requires research. There are several ways to treat ballast water to kill the microscopic larvae of crabs, insects, barnacles and molluscs. These include filtration, heating, or chemical treatments. The challenge is to develop a strategy that is cheap, simple, fast, and effective at a practical scale. Large ships can carry up to a million gallons of ballast water per tank, which may be discharged quickly in case of emergency like when a ship runs aground.

The ballast water treatment program that Smith developed at Marrowstone led to the establishment of an Invasive Species Section at WFRC, which Smith joined USGS in 2006 to lead before becoming the Ecology Section Leader. While at USGS Smith worked with Noah Adams of the Columbia River Research Laboratory (CRRL) to create Cooperative Research and Development Agreements (CRADAs) that foster partnerships with industry. Right now three CRADAs are in place to research, develop and market new technologies to solve environmental challenges like ballast water treatment (http:/go.usa.gov/TPpQ) and fish passage at dams. This research is resulting in the filing of new patents, and could provide revenue for USGS.

In 2009 Smith's invasives program was expanded through a congressional appropriation to develop an invasive species research and monitoring program for the Columbia River Basin in partnership with Washington State University and the CRRL. Smith has also worked with WFRC's Deborah Reusser who develop databases for organizing information about invasive species in the countries of the Pacific Rim and modeling global distributions in a changing climate. See http://crbais.psmfc.org.

Smith officially retired from USGS at the end of June, ending a long and varied career that included stints as a dolphin trainer, an owner of two ice cream stores and a teacher of transcendental meditation, among other things. Smith plans to spend more time with his wife and three children, enjoying the outdoors and practicing meditation. Meanwhile, his research legacy at WFRC lives on. For more information contact Jill Rolland at jrolland@usgs.gov or 206-526-6654.

WFRC Scientist Provides Support for Large EU Fish Health Consortium: On June 23-24th, immunologist John Hansen served as a scientific advisor for an ongoing EU commissioned collaborative effort known as Targetfish, which was established to advance the development of novel vaccine and delivery systems for socio-economically important microbial pathogens of fish using state of the art technologies. Targetfish is composed of over 30 different Academic and Industrial partners with a primary goal of enhancing disease prophylaxis for the European fish farming community. For more information contact John Hansen at 206-526-6588 or jhansen@usgs.gov

Events

WFRC Scientists Participate in Fish Passage 2013: An analysis of 15 years of daily counts of white sturgeon passing mainstem Columbia and Snake River dams was presented by USGS Research Fishery Biologist Mike Parsley at the International Conference on Engineering and Ecohydrology for Fish Passage, June 25-27, in Corvallis, OR. Information was presented on annual variation in counts, timing, and size of white sturgeon observed at the dams. The dataset revealed interesting information on trends over time and differences among dams. For more information, contact Mike Parsley at 509-538-2299 x 247 or mparsley@usgs.gov

WFRC Participates in New Puget Sound Ecosystem Monitoring Program Workgroup: As part of the effort to recover Puget Sound, the Puget Sound Partnership is developing the Coordinated Ecosystem Monitoring Program. On June 21, WFRC scientists participated in the new Puget Sound Ecosystem Monitoring Program (PSEMP) Forage Fish and Food Webs workgroup. The meeting took place at the Padilla Bay National Estuarine Research Reserve in Mount Vernon, WA. The workgroup discussed organizational structure; reviewed opportunities to highlight current monitoring gaps and needs; and began a process to ensure these needs are properly identified and addressed by the PSEMP Steering Committee. The goal is to coordinate monitoring efforts that provide credible, high quality and accessible monitoring findings for partners, decision-makers, and ultimately, the public. For more information, contact Theresa Liedtke at 509-538-2299 x270 or tliedtke@usgs.gov.

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